HAWAI'I UNDERSEA RESEARCH LABORATORY

QUICK LOOK REPORT DIVE: P4-093

MISSION STATUS

Location: Nihoa, NWHI

Latitude: 23°10.8295 **Longitude:** 161°53.7100

Mission Date: 9/7/2003 **Duration:** 6 h 42 min

Maximum Depth: 1228 m

Project Title: Canyon & Scavenger Communities of the Main & Northwestern Hawaiian Islands

Principal Investigator: Craig Smith & Eric Vetter

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Observer 1: Craig Smith **Observer 2:** Amanda Halberg

Address: same as above **Address:** HPU

Pilot 1: Terry Kerby **Pilot 2:**

Scientific Data Acquired: Prepare an abstract outlining your objectives, techniques, findings, etc.

Objectives:

1) To locate 350 m station in canyon and
   - recover baited trap
   - observe bait parcel
   - collect 3 tube cores
   - census fish & other megafauna
   - Collect drift algae.
2) Transit to 350 m station outside canyon and:
- collect 3 tube cores
- deploy and observe bait parcel
- deploy baited trap

Dive touched down and 374 m on sandy bottom in Nihoa Canyon head. We transitted 800 m to our shallow canyon station, to find the 3 kg bait parcel left 24 hrs completely stripped. The baited

trap was recovered with ~50 shrimp of two species inside. We collected a scoop net sample of drift algae with 20 large snails feeding on the algae. These snails are very abundant at this site (>1 m2) suggesting substantial algal detrital input. We collected three tube cores for macrofauna at this site. We then transitted 3 km to our shallow slope site, where we deployed a bait parcel (3kg), a baited trap, and collected 3 tube cores for macrofauna. The bait parcel attracted dozens of shrimp, 3 decorator crabs and a squalid shark in the first 1/2 hour. Nonetheless, fish diversity and biomass at this station is much less than in the canyon.

Species list:	
Squalus misukurii	Chaunax fimbriatus
Plesiobatis daviesi	Plactranthias kelloggi
Doldier fish	Etelus coruscans
Seriola dumerili	Apagonid
Conger sp	

MISSION EVALUATION:

Limitations, failures, or operational problems noted:

It was difficult to conduct quantitative video surveys without knowing the speed or distance traveled over the seafloor.

Recommendations for corrective action or improvement:

I recommend that the Pisces IV and V acquire a Doppler current meter system that allows recording of speed and elevation over the seafloor during surveys.

In your opinion, did the mission essentially achieve its purpose? Compare actual work accomplished with the work that was expected to be accomplished.

Excellent dive. Orion manipulator worked well. Slope appears to harbor much less diversity than canyon at 350 m depths. The mission achieved nearly all of its goals, with the exception of collecting all the desired tube cores.

List specimens or samples collected on the mission.

Scavenger trap with ~ 50 shrimp (*Laevigatus ensifer*) and a few amphipods from 350 m in canyon. Three push core samples (fixed for macrofauna) from each of the 350 m canyon and slope sites.

Dive **P4-093**

DATA RELEASE

Data may be retained by the project leader for up to 2 years after the mission date with the following exception. NOAA may request to use photos for publication or publicity purposes at any time.

Fill in the appropriate statement below and sign this form.

I hereby release the data archived by HURL for public consumption following mission

Canyon & Scavenger Communities of the Main & Northwestern Hawaiian Islands
(project title)

held on 9/7/2003 (date) in the following way:

a. CTD data by 9/7/2005 (date)

b. voice transcripts, video, and still camera film by 9/7/2005 (date)
c. other 9/7/2005 (date)

d. I will give my written consent to individuals wishing to use these data prior to the above dates depending on the nature of the request(s).

_____ Principal Investigator